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ABSTRACT

The feasibility of using ticket dispensing machines to collect campground fees was tested in the California Region of the U. S. Forest Service during the summer of 1961 and described in this report. In addition, tests were made on the performance of tickets as a source of information. This part of the research was conducted with the belief that characteristics of campers and their equipment can be estimated by analyzing the self-registration information on campground fee receipts issued by ticket vending machines. Analysis of data yielded information on place of residence, group size, camping equipment, campsite location, and duration of visit. To benefit furture campground development and design, modifications are suggested for improving response and for handling tickets. (BL)

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AN INEXPENSIVE METHOD for SAMPLING CAMPERS

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AN INEXPENSIVE MEANS OF SAMPLING CAMPERS--
SELF-REGISTRATION FEE RECEIPTS

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DEPARTMENTAL TECHNICAL REPORT 3

AN INEXPENSIVE MEANS OF SAMPLING CAMPERS -- SELF-REGISTRATION FEE RECEIPTS

Richard L. Bury and James W. Hall

Abstract

Characteristics of campers and their equipment can be estimated by analyzing the self-registration information on campground fee receipts issued by ticket vending machines. These data can yield acceptably reliable information on place of residence, group size, camping equipment, etc. Tickets used by the U.S. Forest Service are evaluated as a source of information, and modifications are suggested for improving response and for handling tickets.

CONTENTS

Introduction 1
Information Available 2
The Sample 3
Visitor Response 4
Recommendations for Ticket Format 4
Recommendations for Handling Tickets 6

FIGURES

1. Ticket dispensing machine and instructions 1
2. Ticket display box and ticket dispensing machine 2
3. Experimental ticket 2
4. Suggested revisions of ticket format 5

TABLES

1. Non-response to each item of information requested 4

AN INEXPENSIVE MEANS OF SAMPLING CAMPERS -- SELF-REGISTRATION FEE RECEIPTS *

Richard L. Bury and James W. Hall

INTRODUCTION

Information about visitors and their use of recreation areas can now be collected at low cost. The source of this data is the camper's receipt from ticket dispensing machines now used to collect fees on many public recreation sites. Similar information could be requested through other camper-operated systems for registration and/or fee collection. For example, such information could be collected in connection with the self-payment fee envelope now used by the U. S. Forest Service.

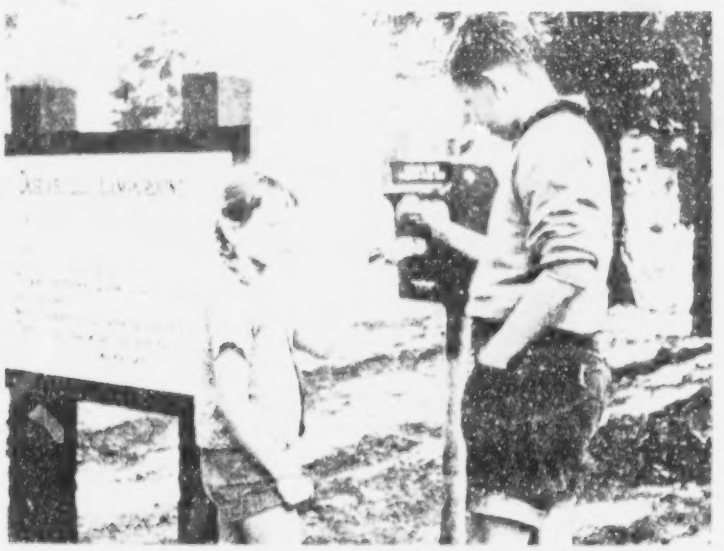

Figure 1. Ticket dispensing machine and instructions

The feasibility of using ticket dispensing machines to collect campground fees was tested in the California Region of the U. S. Forest Service during the summer of 1961. (1) A ticket, dispensed automatically upon insertion of proper coins in a centrally-located machine, served as the camper's receipt for a single day's fee. The information requested on one side of the ticket was to be completed and the ticket then placed in a special plastic-fronted box at the camper's site.

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* This report is based on research conducted while the authors were employed by the U. S. Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California. The views expressed by the authors are not necessarily those of the Forest Service. Detailed results can be found in: Hall, James W. "Response rates to a request for self-registration on machine-vended receipts for campground fees." 1964. Unpublished report under file designation 4220, Pacific Southwest Forest and Range Experiment Station.

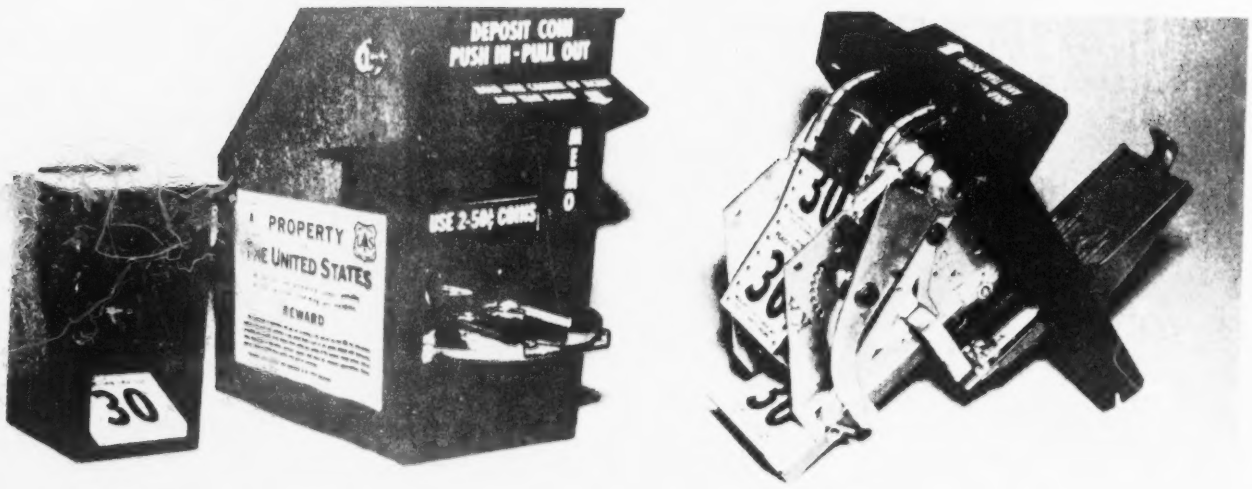

Figure 2. Ticket display box and ticket dispensing machine

The campground attendant checks these boxes for current fee ticket daily, and periodically removes the expired tickets and forwards them for audit. Administrators consider the method very successful for collecting fees (2) and have installed machines in an increasingly large number of campgrounds.

INFORMATION AVAILABLE

The usual registration information required by motels was requested. Thus, the form was not considered a questionnaire and did not require approval by the Bureau of the Budget. Specifically, the ticket used on the test campgrounds looked like this:

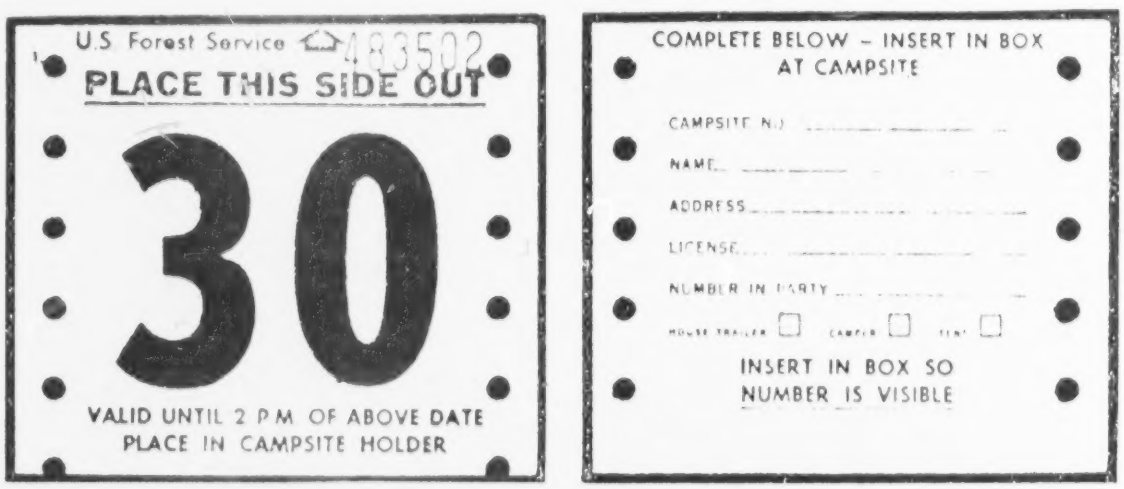

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Figure 3. Experimental ticket

The large bold-face number indicates the day of month for which fee has been paid; it permits the campground attendant to check for current payment of fee without leaving his vehicle.

Much useful information can be obtained by analyzing the resultant data. For example, we could estimate the total, average, and distribution of values for:

1. Attendance (groups, visits, and visitor-days)
2. Group size (number of persons in the group)
3. Length of visit (days)
4. Place of residence
5. Basic equipment for shelter

Of course, this information could be classified by days, family sites within the campground, etc.

Such information would be useful to planners and managers chiefly for delineating the current and trend conditions of recreation use--e.g., average group size, average length of stay, popularity of boat trailers, etc. Applications to recreation research would be similar, except that analysis could be more intensive.

The apparent preference among family sites within the campground could be estimated by comparing the number of days each site was occupied. A search among the attributes of those sites might help in defining the features of location, design, or natural amenities most desired by campers. By adding this information to known distributions for group size and equipment types, the analyst might gain valuable insight to optimal campsite design.

In addition, the tickets could be used to compile a panel of visitors for future surveys.

Of course, only a sample of the total tickets would usually be analyzed--and probably only when responding to some particular research question or when periodically sampling for trends in visitor characteristics.

THE SAMPLE

Because this information could be so useful and so inexpensive to obtain, we decided to test the performance of tickets as a source of information. All of the 1984 tickets issued during 1961 on the two test campgrounds were furnished to us for analysis. Two major problem areas were revealed: (1) some visitors bought tickets but failed to complete self-registration as requested; and (2) tickets from different campsites sometimes became mixed during collection and transport.

The ticket dispensing machines had been initially installed on two widely separated campgrounds, one in the Sierra Nevada mountains and the other near a beach on the Pacific Ocean. Each offered a different type of camping environment and conceivably different visitor characteristics. Performance as an information source was essentially similar at both locations and throughout the summer months.

VISITOR RESPONSE

As a source of information about visitors, the chief difficulty with tickets was the high proportion left entirely blank--some 35% of the 1984 tickets purchased. The problem of non-response is general in survey research; the investigator will never know the character of the non-respondents. This can be a very important source of error--for example, in determining the length of visit or number of visitors. The information value of tickets could be improved most by reducing the rate of total non-response.

Table 1. Non-Response to each item of information requested

Item	Percent Non-Response
Campsite number	3.6
Name	1.0
Auto license	7.6
Number in party	4.7
Equipment	6.9
Address	
None at all	2.3
No city or state	25.4
n=1152	

Percentages based on all tickets partially or totally completed at both campgrounds; tickets totally blank excluded from analysis.

About one-sixth of the non-blank tickets cited only street address without giving city and state. This difficulty may be attributed to wording of the ticket and would be easily corrected.

Blank tickets might have been deposited mainly by visitors who stayed more than one night. Although not tested statistically, this assumption appears reasonable from examining observed differences in visitor behavior. The campground with the higher proportion of completely blank tickets also appears to have received the longer visits.

RECOMMENDATIONS FOR TICKET FORMAT

If the above assumption is true, the chief response problem might be solved by re-designing the instructional sign and the ticket. Visitors would be requested to provide information each day of their visit. Response could be further encouraged by simplifying registration after the first night--for example, by asking only for name and campsite number.

Non-response could probably be lowered significantly by the following three simple changes, all of which have been initiated by National Forest administrators: First, signs informing the visitor of this self-registration system should be quite clear in their story. In general, an instructional sign should be clear, brief, and politely firm in its phrasing. (3) Campers are usually eager to set up and dislike reading long forms or instructions.

Second, each campsite should be separately and clearly identifiable. Each camper should be able to find his campsite number easily both at night and in the daytime. The Forest Service has largely remedied this earlier deficiency by placing numbers on posts supporting the ticket boxes. Numbers could also be stencilled on the sides or top of the ticket boxes. The box and post (or other campsite numbering device) must be located to relate clearly to the campsite intended; this is critical for avoiding confusion between adjacent sites.

Third, the ticket format could be changed to induce higher response. National Forest administrators have already changed the ticket in some ways. A wealth of information on questionnaire design is available and would be useful in this regard. Two suggested formats are shown in Figure 4.

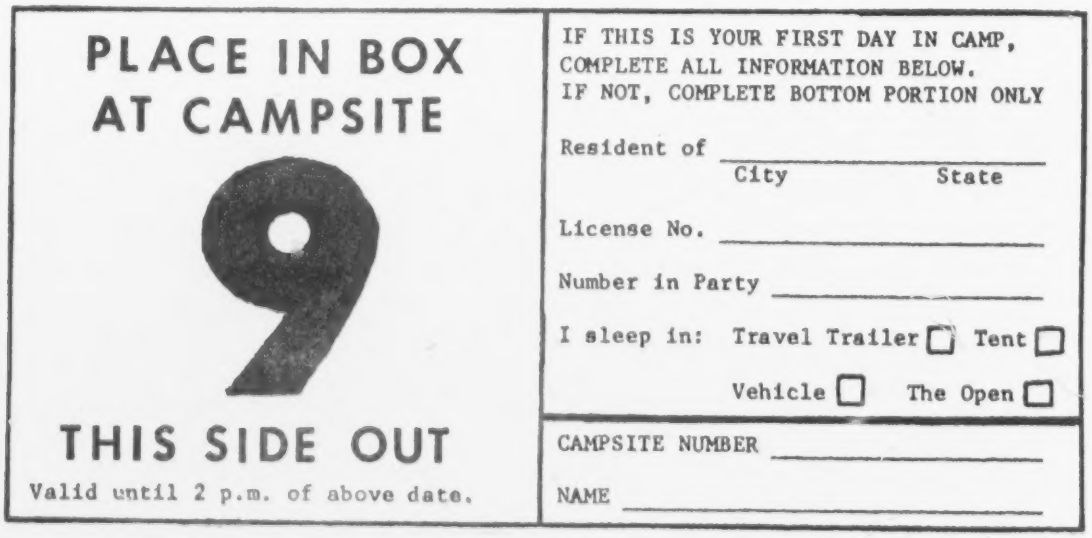

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Figure 4. Suggested revisions of ticket format

Note that groups who have already registered are now asked to fill in only their name and campsite number. This should reduce the rate of entirely-blank tickets, if we assume that complete lack of response is due mainly to repeat groups who believe re-registering is unnecessary or who consider it too much trouble.

The response rate for each item may have been affected by its order on the form; the first items had a higher completion rate. Note the rearrangement on the revised tickets. Address is now the first item; city and state are explicitly requested. A directive phrase now clarifies the request for information on equipment. The often-misunderstood term "camper" has been replaced by the term "vehicle." (the new term implies coaches, station wagons, van-type vehicles, and cars). License number has been eliminated in one format. It is unnecessary as an indicator to residence area if we have name and address, and is difficult for many persons to recall. It highly useful for campground administration, it could of course be retained. Street address could be deleted if not frequently needed for assembling a recreation panel or for contacting the camper quickly and easily at his residence.

The camper must now go through the complete list of information before signing his name and campsite number. This leaves the easiest items until the last, and therefore may induce the camper to complete all items.

Note that the information side faces outward on one of the suggested formats. This might induce higher response if the visitor feels that the attendant can easily check for completion of tickets. (5)

RECOMMENDATIONS FOR HANDLING TICKETS

Since tickets may be selected for a sample any time after purchase, they will be most useful as a source of data if handled routinely in some systematic fashion. The concomitant goals of management efficiency and information availability could be met by devising a simple fastener or container for collecting, storing, and transporting tickets by campsite number. This is important because the analyst often cannot allocate loose, completely blank tickets to the proper campsite. We found that displacements from proper campsite or sequence of deposit would create sampling problems and lessen the amount of usable information, and would also introduce a source of bias which might not be recognized by the statistically unwary analyst.

Again, three rather simple modifications of the initial system could increase the effectiveness of tickets for providing information:

First, the Forest Service trial determined that clear plastic rather than glass should be used for the ticket box window. Several glass windows were broken and tickets lost or misplaced. Plastic windows are now specified on Forest Service plans (Forest Service 1963, op. cit.)

When collected, the tickets from each campsite box should be fastened together effectively and in order of deposit. Heavy staples, crossed rubber bands, or other positive fasteners should be used.

Third, bundles of tickets should be secured so that they do not become broken and mixed with tickets of other campsites during storage and shipment. These last two suggestions are chiefly the responsibility of the campground attendant, who must recognize his importance as the link between visitor and analyst.

* * * * *

Valuable information can be obtained at low cost from campground fee tickets. The usefulness of this source has been improved in California through activating some of the above suggestions. As remaining difficulties are overcome in the next few years, researchers as well as managers may find this source of information highly useful in their work.

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3.--In a study of the response-eliciting qualities of signs requesting registration by wilderness area visitors, the Pacific Northwest Forest and Range Experiment Station concluded that signs inducing the highest response were brief, to the point, politely forceful, and included a very short justification for registration. Wenger, Wiley D. Jr. 1964. A Test of Unmanned Registration Stations on Wilderness Trails. U.S. Forest Service Research Paper PNW-16, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

4.--For example, see: (a) Good, C.V., and D.E. Scates, 1954. Methods of Research. New York, D. Appleton-Century Co., 920 pp., illus. (b) Jahoda, M., M. Deutsch, and S.W. Cook in Research Methods in Social Relations, Part Two, "Selected Techniques", Chapter 12, 1953. New York, The Dryden Press, 759 pp., illus. (c) Payne, S.L. The Art of Asking Questions. 1951. Princeton, N.J., Princeton University Press, 249 pp., illus.

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